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REPORT
No. 100-442

INDOOR AIR QUALITY ACT OF 1988

AUGUST 2 (legislative day, AUGUST 1), 1988.—Ordered to be printed

Mr. BURDICK, from the Committee on Environment and Public Works, submitted the following

REPORT

[To accompany S. 1629]

The Committee on Environment and Public Works, to which was referred the bill (S. 1629) to authorize a national program to reduce the threat to human health posed by exposure to contaminants in the air indoors having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

GENERAL STATEMENT

There is growing evidence that indoor air contamination poses a significant threat to public health. Indoor air pollutants, such as radon, asbestos, volatile organic chemicals, and combustion-by-products, can cause adverse health effects, including cancer, respiratory illness, and skin and eye irritation.

This legislation provides a comprehensive framework for the protection of indoor air quality. It expands and strengthens the authority of the Environmental Protection Agency (EPA) to conduct research of indoor air pollutants and directs the EPA to develop "health advisory" documents outlining scientific knowlege of indoor air contaminants.

The bill calls for EPA to develop a national response plan, identifying actions that Federal agencies will take to reduce indoor air contamination. EPA also is to assist State governments in assessment of indoor air contamination and in development of management strategies and response programs.

The bill expands an existing Federal efforts to assess "sick buildings." It calls for reports on air quality problems in buildings, in-

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cluding the nature of the problem and appropriate corrective action.

The bill establishes an interagency council on indoor air quality and a clearinghouse on indoor air pollution, and calls for several studies and related reports.

BACKGROUND

Recent scientific studies have identified a wide range of contaminants in the air indoors at levels which pose a significant threat to human health.

In June of last year, EPA published a comprehensive, four volume, multi-year study of total exposure to air pollutants. The reports states:

> The major finding of this study is the observation that personal and indoor exposures to these toxic and carcinogenic chemicals are nearly always greater—often much greater—than outdoor concentrations. We are led to the conclusion that indoor air in the home and at work far outweighs outdoor air as a route of exposure to these chemicals. (p. 7, Summary and Analysis Volume)

In addition, the Conservation Foundation recently published a major report entitled "State of the Environment: A View Toward the Nineties." The report identifies several major environmental issues, including air toxics. The report states:

> Since the early 1970's the United States national air pollution control programs have focused largely on reducing routine outdoor emissions of the most common pollutants from major industries and motor vehicles. But these are not the only—or perhaps even the most serious—problems . . . Information that has emerged in recent years makes it clear that . . . contamination of indoor environments may be a much more serious problem than was realized a decade ago and must be moved much higher on public and private research agendas . . . (p. xxxv)

The Subcommittee on Environmental Protection held a hearing on the health effects of indoor air contaminants on April 24 of this year. The primary findings of the hearings are summarized below.

1. Exposure to air pollutants occurs both outdoors and indoors (e.g., workplaces, residences, schools, public buildings, and transportation vehicles).

2. Pollutants in the indoor air include radon, asbestos, volatile organic compounds (e.g. formaldehyde, and benzene), combustion by-products (e.g. carbon monoxide), metals and gases (e.g. lead, chlorine, and ozone), tobacco smoke, and respirable particles.

3. Radon is the most harmful indoor air pollutant. EPA estimates that radon causes between 5,000 and 20,000 lung cancer deaths each year.

4. Other indoor pollutants also pose a serious health threat. According to EPA estimates, these pollutants cause between 3,500 and 6,500 cancers each year.

5. Sources of these pollutants include commercial products, building materials, combustion appliances, indoor application of pesticides, and outdoor sources.

6. A number of Federal agencies, including the EPA, Consumer Product Safety Commission, Department of Energy, Department of Health and Human Services, and others are involved in programs related to indoor air.

7. A number of States have developed programs to address radon and other indoor air pollutants.

Congress has made some progress in addressing indoor air quality problems in the past several years. The 99th Congress enacted bills to establish a program of research on radon and indoor air pollutants at EPA and to establish a national program for control of asbestos in schools.

Indoor Air Quality Act

The Indoor Air Quality Act, S. 1629, was introduced on August 8th of this year by Senators Mitchell, Chafee, Durenberger, Baucus, Stafford, Mikulski, and Lautenberg.

The bill establishes a national program to reduce the threat to health posed by exposure to contaminants in the air indoors. The basic goals and objectives of the bill include:

1. *Emphasis on Research.*—A primary objective of the bill is to expand and strengthen research of indoor air contaminants.

2. *Identification of Contaminant Health Effects.*—EPA would develop "health advisories" on contaminants in the indoor air indicating the health risks at various concentrations, including a "no adverse effect level". The bill does not provide for setting enforceable standards for indoor air contaminants.

3. *No New Regulatory Authority.*—There is no authority to regulate indoor air contaminants, but the authorities in existing statutes are to be focused and directed in a national response plan.

4. *Demonstrate State Role.*—States may seek grant support to demonstrate development of very basic management strategies and assessments and have the option of developing problem specific response programs.

5. *Establishment of Institutional Base.*—An institutional base for indoor air activities is established through creation of an indoor air office at EPA and an interagency Council on Indoor Air Quality.

6. *EPA Leadership Role.*—The bill gives the EPA the lead role in developing the Federal response to indoor air contamination. Other agencies with responsibilities include the General Services Administration and the National Institute of Occupational Health and Safety.

7. *Preservation of Other Initiatives.*—The bill is designed as a general management framework. It does not preempt the development of additional pollutant specific legislation (e.g. radon, or asbestos) nor does it preempt State laws or initiatives.

The Subcommittee held a hearing on the bill in November of last year. Witnesses at the hearing included the American Lung Asso-

ciation, the American Society of Heating, Refrigeration, and Air Conditioning Engineers, the Consumer Federation of America, the Council for Clean Indoor Air, and the Honeywell Corporation. These witnesses generally expressed strong support for the bill and made suggestions for improvements and clarifications.

The witnesses from EPA said that while the Administration views indoor air quality as a "serious problem," it opposes the legislation on the grounds that existing programs adequately address the problem.

Key Changes to Bill

Based on comments from hearing witnesses and others, the Committee made the following changes and additions to the original legislation:

1. *Building Assessments.*—Added a section expanding the authority of the National Institute of Occupational Safety and Health (NIOSH) to conduct assessments of "sick buildings". The bill authorizes expenditures of $5 million per year.

2. *Radon Training Centers.*—Added a section establishing five radon training centers at an annual cost of $2 million. Centers are to assist public officials, contractors, and the public in understanding and responding to radon and are to be located at universities. Senator Lautenberg introduced the amendment.

3. *Other Radon Amendments.*—Added two other provisions concerning radon. The first provides for information and education about potential radon problems in child care centers. The second provides for a memorandum of understanding between EPA and HUD on radon activities. Seantor Lautenberg proposed these provisions.

4. *Schools Assessment.*—Added language requiring a study of the seriousness and extent of indoor air contamination in the nation's schools and a report to Congress within three years of enactment. Senator Chafee proposed this provision.

5. *Overall Funding.*—As introduced, S. 1629 included a total authorization of $58 million a year for five years. The bill reported by the Subcommittee and full Committee provides funding of $49.5 million.

Changes to the bill as introduced include the addition of $5 million for building assessment, $2 million for radon training centers, and $1 million for radon child care demonstration programs.

Other changes include reductions in expenditures from $25 to $18 million for research, $20 to $12 million for State grants, and $3 to $1.5 for the national indoor air council.

6. *National Council.*—Removed the national indoor air quality council from the Executive Office of the President and restructured it as an interagency council with similar, but more limited duties.

7. *Federal Response Plan.*—Removed the Federal response plan (addressing air quality in Federal buildings) from the national response plan and provided for it in a new section.

8. *Public Review.*—Clarified and strengthened the requirements for public review and comment on various documents provided for in the bill.

9. *Technology and Management Practice Bulletins.*—Established a subsection providing for publication of bulletins, including assessments of the effectiveness, feasibility, and cost of various technologies and management practices for the control of indoor air pollution.

10. *Goals of Response Plan.*—Modified the goals of the national response plan and the Federal response plan to delete reference to ambient standards under the Clean Air Act and to clarify objectives.

Section-by-Section Analysis

The Indoor Air Quality Act of 1988 authorizes a national program to reduce the threats to humnan health posed by exposure to contaminants in the air indoors. The Act includes the following provisions—

Sec. 1: Title.—The title of the bill and table of contents are identified.

Sec. 2: Findings.—Contaminants in the air indoors pose a serious threat to human health and there is not an adequate effort by Federal and State governments to respond to this problem.

Sec. 3: Purposes.—The purpose of the legislation is to establish a coordinated research program on indoor air contamination, to establish a process for directing and focusing the authorities of existing Federal statutes to reduce indoor air contamination, and to demonstrate and develop State and local responses to indoor air contamination problems.

Sec. 4: Definitions.—Key terms are defined.

Sec. 5: Indoor Air Quality Research.—The bill—

Provides the EPA with general authority to conduct research of indoor air contamination and identifies specific research topics to be addressed;

Establishes a program to demonstrate various technologies which may contribute to the reduction of indoor air contamination and provides for grant assistance to governments and others for such demonstrations;

Provides for development of technical and management practice bulletins providing assessments of technologies for control and measurement of indoor air contaminants. The Administrator is to provide that technology and management practice bulletins are reviewed by the public and interested groups prior to publication. The Administrator shall assure that interest groups with knowledge and expertise in building design, management and construction have an opportunity to participate in development of bulletins.

Other provisions of this section address radon in child care facilities, assessment of exposure to contaminants indoors and outdoors, assessment of radon in schools, and clarification of indoor air research legislative authority.

Sec. 6: Indoor Air Contaminant Health Advisories.—The bill provides that the EPA develop a list of indoor air contaminants and prepare health advisory documents for these contaminants.

Health advisory documents are to describe the characteristics of the contaminant and indicate health threats at various concentrations, including the concentration at which there is no adverse health effect. EPA is to issue 6 advisories within 18 months and an additional 6 advisories within the next 18 months. The Agency is to use the latest available scientific information and research in this effort. In developing advisories, EPA shall explain the bases for the anticipated health effects described; for example, the Agency shall indicate when anticipated health effects at low concentrations are extrapolations from health effects at higher concentrations rather than observed health effects at the low concentrations. The scientific studies on which the health advisories are based should be referenced in the document.

Although listing of contaminants is not an Agency rulemaking, public notice and comment periods shall be provided with consideration of such public comments by EPA before the issuance of a final list of contaminants. In the case of health advisories, EPA is to provide notice in the Federal Register 90 days prior to publication and shall consider public comment prior to publication.

Sec. 7: National Indoor Air Quality Response Plans.—The EPA is to develop a national response plan identifying actions to be taken to reduce contaminants in indoor air. The response plan is to be submitted to Congress within 24 months of enactment and biennially thereafter.

The response plan is to identify and schedule needed actions under the authority of existing statutes, including the Clean Air Act, the Federal pesticide law, the Toxic Substances Control Act, and other statutes. The plan also is to include general information, education, and technical assistance programs to reduce indoor air contamination.

The Administrator is to provide for public review and comment on the response plan and is to provide for comment on the plan by the Council on Indoor Air Quality established under section 11 of this Act.

Sec. 8: Federal Building Response Plan and Demonstration Program.—A Federal Building Response Plan is to address air quality in Federal buildings. The plan is to identify general management practices for improving indoor air. Buildings with identified indoor air quality problems will be considered for assessment under section 13 of this Act. The plan is to be submitted to Congress 24 months after enactment of this Act and biennially thereafter.

The Administrator is to provide for public review and comment on the Federal building response plan and is to provide for comment on the plan by the Council on Indoor Air Quality established under section 11 of this Act.

The General Services Administration, in consultation with the EPA, is to conduct a program to demonstrate methods of reducing indoor air contamination in new Federal buildings. One half of one percent of funds appropriated for construction of such buildings are to be reserved for demonstration of indoor air quality technologies and building management methods.

This section also provides that any new headquarters for the EPA be designed, constructed, and operated as a model to demonstrate protection of indoor air quality.

Sec. 9: State and Local Indoor Air Quality Programs.—The bill provides for the demonstration of State strategies for the management and assessment of indoor air quality. State management strategies are to identify a lead agency for protection of indoor air quality, describe existing programs at the State and substate levels, and assure coordination with programs addressing ambient air quality. Assessment programs are to identify contaminants of concern, identify geographic areas experiencing problems, and provide for periodic assessment of indoor air quality conditions and trends.

In addition, States or other air pollution control agencies may develop response programs to address a particular indoor air contaminant of concern, a particular class of buildings, or buildings in a specific geographic area.

Limited Federal grant support is provided for demonstration and development of management and assessment strategies and response programs.

Sec. 10: Office Of Indoor Air Quality.—An Office of Indoor Air Quality is established within the EPA to manage indoor air activities of that agency and to work with other Federal agencies and interested groups on indoor air issues.

Sec. 11: Council on Indoor Air Quality.—The bill establishes an interagency Council on Indoor Air Quality Council to coordinate indoor air activities of Federal agencies. The Council is to consist of representatives of Federal agencies and other groups.

Sec. 12: National Indoor Air Quality Information Clearinghouse.—The EPA is to establish a national clearinghouse of information related to indoor air quality and may provide for the operation of the clearinghouse on a contractual basis by a nonprofit organization.

Sec. 13: Building Assessment Demonstration.—The Director of the National Institute of Occupational Health and Safety (NIOSH) is to carry out a program to demonstrate methods of assessment and mitigation of indoor air contamination in "sick buildings". This provision establishes a process for the assessments and is based on an existing NIOSH effort.

The bill provides that assessments are to identify suspected contaminants in the building air, identify sources of contaminants, review health effects, and identify appropriate response measures. Preliminary assessment reports are to be prepared within 180 days and final reports, which are to include an evaluation of the effectiveness of response measures, are to be prepared within an additional 180 days.

The bill provides that buildings are to be selected for assessment based on proposals to be submitted by building owners or occupants. For the purposes of this section, building occupants are employees, tenants, employees of tenants and their authorized representatives. This provision is not intended to provide competitors or others with an economic or other dispute with the building owner a method of harassing the building owner with assessment proposals.

Final assessment reports are to be made available to the Clearinghouse provided under section 12 of this Act and to interested parties.

Sec. 14: Radon Training Centers.—The bill authorizes the EPA to establish a series of five regional training centers to provide instruction on assessment and mitigation of radon to State officials, professional and private firms, and the public.

Sec. 15: State and Federal Authority.—Nothing in this title shall preempt any State or Federal law or local ordinance.

Sec. 16: Authorization.—The bill authorizes total funding of $49.5 million for each fiscal year from 1988 to 1992:

—research and health advisories: $18 million (Of such sums appropriated, one quarter is reserved for health advisories and one quarter for demonstration grants.)
—EPA operations: $10 million (Of such sums appropriated, one fifth is reserved for the information clearinghouse.)
—State management and response grants: $12 million;
—National Indoor Air Quality Council: $1.5 million;
—Building assessment program: $5 million;
—Radon training centers: $2 million;
—Radon in child care centers demonstration: $1 million.

Rollcall Votes

Section 7(b) of Rule XXVI of the Standing Rules of the Senate and the rules of the Committee on Environment and Public Works require that any rollcall votes taken during the consideration of this bill be announced in this report.

On May 11, 1988, the Subcommittee on Environmental Protection of the Committee on Environment and Public Works approved an amendment in the nature of a substitute to the original bill as introduced. The amendment and the bill were approved by voice vote.

On July 14, 1988, the Committee on Environment and Public Works met to mark-up the legislation. The Committee approved an amendment in the nature of a substitute to the bill reported by the Subcommittee and approved an amendment by Senator Breaux concerning public involvement in development of technical information bulletins. The legislation and the amendments were approved by voice vote.

Regulatory Impact

In compliance with section 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact of the reported bill. The reported bill does not include any new regulatory authority.

Cost of Legislation

Section 403 of the Congressional Budget and Impoundment Control Act requires that each bill contain a statement of the cost of such bill prepared by the Congressional Budget Office. That report follows:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, July 26, 1988.

Hon. QUENTIN N. BURDICK,
Chairman, Committee on Environment and Public Works,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for S. 1629, the Indoor Air Quality Act of 1988.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

JAMES L. BLUM,
Acting Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 1629.
2. Bill title: Indoor Air Quality Act of 1988.
3. Bill status: As ordered reported by the Senate Committee on Environment and Public Works, July 14, 1988.
4. Bill purpose: S. 1629 would establish a national research, development, and demonstration program to address indoor air pollution. Overseeing the program would be a newly established Office of Indoor Air Quality within the Environmental Protection Agency (EPA). The bill would also establish a Council on Indoor Air Quality to coordinate federal activities and review the national indoor air response program developed by the EPA. For the purposes of establishing the new office and council and carrying out mandated activities, the bill would authorize appropriations of up to $49.5 million for each of the fiscal years 1989–1993. Of this amount $12 million annually would be available to states wishing to develop and implement their own air quality programs.
5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1989	1990	1991	1992	1993
Authorization level	50	50	50	50	50
Estimated outlays	30	43	47	49	50

The costs of this bill fall within budget function 300.

Basis of Estimate

For the purposes of this estimate, it is assumed that S. 1629 will be enacted by October 1, 1988 and that the full amounts authorized will be appropriated for each fiscal year. Outlays have been estimated on the basis of historical spending patterns for similar programs and on information obtained from the EPA.

6. Estimated cost to State and local governments: None.
7. Estimate comparison: None.

8. Previous CBO estimate: None.
9. Estimate prepared by: Deborah Reis.
10. Estimate approved by: C.G. Nuckols (for James L. Blum, Assistant Director for Budget Analysis).

Bill as Reported

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE AND TABLE OF CONTENTS

Section 1. (a) Title.—This Act, together with the following table of contents, may be cited as the "Indoor Air Quality Act of 1988".
(b) Table of Contents.—

Sec. 1. Title.
Sec. 2. Findings.
Sec. 3. Purpose.
Sec. 4. Definitions.
Sec. 5. Indoor air quality research.
Sec. 6. Indoor air contaminant health advisories.
Sec. 7. National indoor air quality response plans.
Sec. 8. Federal building response plan and demonstration program.
Sec. 9. State indoor air quality programs.
Sec. 10. Office of Indoor Air Quality.
Sec. 11. Council on Indoor Air Quality.
Sec. 12. Indoor air quality information clearinghouse.
Sec. 13. Building assessment.
Sec. 14. Radon training centers.
Sec. 15. State and Federal law.
Sec. 16. Authorizations.

FINDINGS

Sec. 2. The Congress finds that—

(a) Americans spend up to 90 per centum of a day indoors and, as a result, have a significant potential for exposure to contaminants in the air indoors;

(b) exposure to indoor air contaminants occurs in workplaces, schools, public buildings, residences, and transportation vehicles;

(c) recent scientific studies indicate that pollutants in the indoor air include radon, asbestos, volatile organic chemicals (including, formaldehyde and benzene), combustion byproducts (including, carbon monoxide and nitrogen oxides), metals and gases (including, lead, chlorine, and ozone), respirable particles, environmental tobacco smoke, biological contaminants, microorganisms, and other contaminants;

(d) a number of contaminants found in both ambient air and indoor air may occur at higher concentrations in indoor air than in outdoor air;

(e) indoor air pollutants pose serious threats to public health (including cancer, respiratory illness, multiple chemical sensitivities, skin and eye irritation, and related effects);

(f) the National Academy of Sciences estimates that up to 15 per centum of the United States population may have heightened sensitivity to chemicals and related substances found in the air indoors;

(g) radon is among the most harmful indoor air pollutants and is estimated to cause between five thousand and twenty thousand lung cancer deaths each year;

(h) other selected indoor air pollutants are estimated to cause between three thousand five hundred and six thousand five hundred additional cancer cases per year;

(i) indoor air contamination is estimated to cause significant increases in medical costs and declines in work productivity;

(j) as many as 20 per centum of office workers may be exposed to environmental conditions manifested as "sick building syndrome";

(k) sources of indoor air pollution include conventional ambient air pollution sources, building materials, consumer and commercial products, combustion appliances, indoor application of pesticides and other sources;

(l) there is not an adequate effort by Federal agencies to conduct research on the seriousness and extent of indoor air contamination, to identify the health effects of indoor air contamination, and to develop control technologies, education programs, and other methods of reducing human exposure to such contamination;

(m) there is not an adequate effort by Federal agencies to develop response plans to reduce human exposure to indoor air contaminants and there is a need for improved coordination of the activities of these agencies;

(n) there is not an adequate effort by Federal agencies to develop methods, techniques, and protocols for assessment of indoor air contamination in non-residential, non-industrial buildings and to provide guidance on measures to respond to contamination; and

(o) State governments can make significant contributions to the effective reduction of human exposure to indoor air contaminants and the Federal Government should assist States in development of programs to reduce exposures to these contaminants.

PURPOSE

SEC. 3. The purposes of this Act are to—

(a) establish at the Environmental Protection Agency and at other agencies of the United States a comprehensive and coordinated program of research and development concerning the seriousness and extent of indoor air contamination, the human health effects of indoor air contaminants, and the technological and other methods of reducing human exposure to such contaminants;

(b) establish a process whereby the existing authorities of Federal statutes will be directed and focused to assure the full and effective application of these authorities to reduce human exposure to indoor air contaminants where appropriate;

(c) provide support to State governments to demonstrate and develop air quality management strategies, assessments, and response programs; and

(d) to authorize activities to assure the general coordination of indoor air quality-related activity, to provide for reports on indoor air quality to Congress, to provide for assessments of indoor air contamination in specific buildings by the National Institute for Occupational Safety and Health, to assure that data and information on indoor air quality issues is available to interested parties, to provide training, education, information, and technical assistance to the public and private sector, and for other purposes.

DEFINITIONS

SEC. 4. For the purposes of this Act.—

(a) the term "Agency" means the United States Environmental Protection Agency;

(b) the term "indoor" refers to the enclosed portions of buildings including non-industrial workplaces, public buildings, Federal buildings, schools, commercial buildings, residences, and the occupied portions of vehicles;

(c) the term "indoor air contaminant" means any solid, liquid, semisolid, dissolved solid, biological organism, aerosol, or gaseous material, including combinations or mixtures of substances in indoor air which may reasonably be anticipated to have an adverse effect on human health;

(d) the term "Federal agency" or "agency of the United States" means any department, agency or other instrumentality of the Federal Government, including any independent agency or establishment of the Federal Government or government corporation;

(e) the term "Federal building" means any building which is owned or leased by the Federal Government and managed by the General Services Administration;

(f) the term "Administrator" means to the Administrator of the Environmental Protection Agency;

(g) the term "Director" means the Director of the National Institute of Occupational Safety and Health;

(h) the term "local education agency" means any educational agency as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 3381); and

(i) the term "local air pollution control agency" means any city, county, or other local government authority charged with the responsibility for implementing programs or enforcing ordinances or laws relating to the prevention and control of air pollution including indoor air pollution.

INDOOR AIR QUALITY RESEARCH

SEC. 5. (a) AUTHORITY.—(1) The Administrator shall, in cooperation with appropriate Federal agencies, establish a national research, development, and demonstration program to assure the quality of air indoors and as part of such program shall promote the coordination and acceleration of research, investigations, experiments, demonstrations, surveys, and studies relating to the causes, sources, effects, extent, prevention, detection, and correction of contamination of indoor air.

(2) In carrying out the provisions of this section, the Administrator is authorized to—

(A) collect and make available to the public through publications and other appropriate means, the results of research, development and demonstration activities conducted pursuant to this section;

(B) conduct research, development and demonstration activities and cooperate with other Federal agencies, with State and local government entities, interstate and regional agencies, other public agencies and authorities, nonprofit institutions and organizations and other persons in the preparation and conduct of such research, development and demonstration activities;

(C) make grants to the States or to local government entities, to other public agencies and authorities, to nonprofit institutions and organizations, and to other persons;

(D) enter into contracts or cooperative agreements with public agencies and authorities, nonprofit institutions and organizations, and other persons;

(E) conduct studies, including epidemiological studies, of the effects of indoor air contaminants or potential contaminants on mortality and morbidity and clinical and laboratory studies on the immunologic, biochemical, physiological, and toxicological effects including the carcinogenic, teratogenic, mutagenic, cardiovascular, and neurotoxic effects of indoor air contaminants or potential contaminants;

(F) develop and disseminate informational documents on indoor air contaminants describing the nature and characteristics of such contaminants in various concentrations;

(G) develop effective and practical processes, methods, and techniques for the prevention, detection, and correction of indoor air contamination and work with the private sector to encourage the development of innovative techniques to improve indoor air quality;

(H) construct such facilities and staff and equip them as may be necessary to carry out the provisions of this section;

(I) call conferences concerning the potential or actual contamination of indoor air giving opportunity for interested persons to be heard and present papers at such conferences;

(J) utilize, on a reimbursable basis, facilities and personnel of existing Federal scientific laboratories and research centers; and

(K) acquire secret processes, technical data, inventions, patent applications, patents, licenses, and an interest in lands, plants, equipment and facilities and other property rights, by purchase, license, lease, or donation.

(b) PROGRAM REQUIREMENTS.—The Administrator shall conduct or assist research, investigations, studies, surveys, or demonstrations with respect to, but not limited to, the following—

(1) the effects on human health of contaminants or combinations of contaminants at various levels whether natural or anthropogenic, that are found or are likely to be found in indoor air;

(2) the exposure of persons to contaminants that are found in indoor air (including exposure to such substances from sources other than indoor air contamination including drinking water, diet, or other exposures);

(3) the identification of populations at increased risk of illness from exposure to indoor air contaminants and assessment of the extent and characteristics of such exposure;

(4) the exposure of persons to contaminants in different building classes or types, and in vehicles, and assessment of the association of particular contaminants and particular building classes or types and vehicles;

(5) identification of building classes or types and design features or characteristics which increase the likelihood of exposure to indoor air contaminants;

(6) assessment of the exposure of workers in non-industrial settings to indoor air contaminants, including assessment of resulting health effects, declines in productivity, sick time use, increased use of employer paid health insurance, and workers compensation claims, and the costs of such declines in productivity, sick time use, and benefits claims;

(7) identification of the sources of indoor air contaminants including association of contaminants with outdoor sources, building or vehicle design, classes or types of products, building management practices, equipment operation practices, building materials, and related factors;

(8) assessment of relationships between contaminant concentration levels in ambient air and the contaminant concentration levels in the indoor air;

(9) development of methods and techniques for characterizing and modeling indoor air movement and flow within buildings or vehicles, including the transport and dispersion of contaminants in the indoor air;

(10) assessment of the fate, including degradation and transformation, of particular contaminants in indoor air;

(11) development of methods and techniques to characterize the association of contaminants, the levels of contaminants, and the potential for contamination of new construction with climate, building location, seasonal change, soil and geologic formations, and related factors;

(12) assessment of indoor air quality in facilities of local education agencies and development of measures and techniques for control of indoor air contamination in such buildings;

(13) development of methods, techniques and instruments for sampling indoor air to determine the presence and level of contaminants including sample collection and the storage of samples before analysis and development of methods to improve the efficiency and reduce the cost of analysis;

(14) development of air quality sampling methods and instruments which are inexpensive and easy to use and may be used by the general public;

(15) development of control technologies or other measures to prevent the entrance of contaminants into buildings or vehicles (for example, air intake protection, sealing, and related measures) and to reduce the concentrations of contaminants

indoors (for example, control of emissions from internal sources of contamination, improved air exchange and ventilation, and related measures);

(16) development of materials and products which may be used as alternatives to materials or products which are now in use and which contribute to indoor air contamination;

(17) development of building or vehicle management practices and related activities which will contribute to the reduction of indoor air contaminants;

(18) development of equipment and processes for removal of contaminants from the indoor air; and

(19) research, to be carried out in conjunction with the Secretary of Housing and Urban Development, for the purpose of developing—

(A) methods for assessing the potential for radon contamination of new construction, including (but not limited to) consideration of the moisture content of soil, porosity of soil, and radon content of soil; and

(B) design measures to avoid indoor air pollution.

(c) TECHNOLOGY DEMONSTRATION PROGRAM.—(1) The Administrator may enter into cooperative agreements or contracts, or provide financial assistance in the form of grants, to public agencies and authorities, nonprofit institutions and organizations, employee advocate organizations, local educational institutions, or other persons, to demonstrate practices, methods, technologies, or processes which may be effective in controlling sources or potential sources of indoor air contamination, preventing the occurrence of indoor air contamination, and reducing exposures to indoor air contamination.

(2) The Administrator may assist demonstration activities under paragraph (1) of this subsection only if—

(A) such demonstration activity will serve to demonstrate a new or significantly improved practice, method, technology or process or the feasibility and cost effectiveness of an existing, but unproven, practice, method, technology, or process and will not duplicate other Federal, State, local, or commercial efforts to demonstrate such practice, method, technology, or process;

(B) such demonstration activity meets the requirements of this section and serves the purposes of this Act;

(C) the demonstration of such practice, technology, or process will comply with all other laws and regulations for the protection of human health, welfare, and the environment; and

(D) in the case of a contract or cooperative agreement, such practice, method, technology, or process would not be adequately demonstrated by State, local, or private persons or in the case of an application for financial assistance by a grant, such practice, method, technology, or process is not likely to receive adequate financial assistance from other sources.

(3) The demonstration program established by this subsection shall include solicitations for demonstration projects, selection of suitable demonstration projects from among those proposed, supervision of such demonstration projects, evaluation of the results of demonstration projects, and dissemination of information on the ef-

fectiveness and feasibility of the practices, methods, technologies and processes which are proven to be effective.

(4) Within one hundred and eighty days after the date of enactment of this Act, and no less often than every twelve months thereafter, the Administrator shall publish a solicitation for proposals to demonstrate, prototype or at full-scale, practices, methods, technologies, and processes which are (or may be) effective in controlling sources or potential sources of indoor air contaminants. The solicitation notice shall prescribe the information to be included in the proposal, including technical and economic information derived from the applicant's own research and development efforts, and other information sufficient to permit the Administrator to assess the potential effectiveness and feasibility of the practice, method, technology, or process proposed to be demonstrated.

(5) Any person and any public or private nonprofit entity may submit an application to the Administrator in response to the solicitations required by paragraph (4) of this section. The application shall contain a proposed demonstration plan setting forth how and when the project is to be carried out and such other information as the Administrator may require.

(6) In selecting practices, methods, technologies or processes to be demonstrated, the Administrator shall fully review the applications submitted and shall evaluate each project according to the following criteria—

(A) the potential for the proposed practice, method, technology, or process to effectively control sources or potential sources of contaminants which present risks to human health;

(B) the consistency of the proposal with the recommendations provided pursuant to paragraph (8) of section 7(d);

(C) the capability of the person or persons proposing the project to successfully complete the demonstration as described in the application;

(D) the likelihood that the demonstrated practice, method, technique, or process could be applied in other locations and circumstances to control sources or potential sources of contaminants, including considerations of cost, effectiveness, and technological feasibility;

(E) the extent of financial support from other persons to accomplish the demonstration as described in the application; and

(F) the capability of the person or persons proposing the project to disseminate the results of the demonstration or otherwise make the benefits of the practice, method, or technology widely available to the public in a timely manner.

(7) The Administrator shall select or refuse to select a project for demonstration under this subsection in an expeditious manner. In the case of a refusal to select a project, the Administrator shall notify the applicant of the reasons for the refusal.

(8) Each demonstration project under this section shall be performed by the applicant, or by a person satisfactory to the applicant, under the supervision of the Administrator. The Administrator shall enter into a written agreement with each applicant granting the Administrator the responsibility and authority for testing procedures, quality control, monitoring, and other measurements

necessary to determine and evaluate the results of the demonstration project.

(9) The Administrator shall enter into arrangements, wherever practicable and desirable, to provide for monitoring testing procedures, quality control, and such other measurements necessary to evaluate the results of demonstration projects or facilities intended to control sources or potential sources of contaminants.

(10) Each demonstration project under this section shall be completed within such time as is established in the demonstration plan. The Administrator may extend any deadline established under this subsection by mutual agreement with the applicant concerned.

(11) Total Federal funds for any demonstration project under this section shall not exceed 75 per centum of the total cost of such project. In cases where the Administrator determines that research under this section is of a basic nature which would not otherwise be undertaken, or the applicant is a local educational agency, the Administrator may approve grants under this section with a matching requirement other than that specified in this subsection, including full Federal funding.

(12) The Administrator shall, from time to time, publish general reports describing the findings of demonstration projects conducted pursuant to this section. Such reports shall be provided to the Indoor Air Clearinghouse provided for in section 12 of this Act.

(d) TECHNOLOGY AND MANAGEMENT PRACTICE ASSESSMENT BULLETINS.—(1) The Administrator shall publish bulletins providing an assessment of technologies and management practices for the control and measurement of contaminants in the air indoors.

(2) Bulletins published pursuant to this subsection shall, at a minimum—

(A) describe the control or measurement technology or practice;

(B) describe the effectiveness of the technology or practice in control measurement of indoor air contaminants;

(C) assess the feasibility of application of the technology or practice in buildings of different types, sizes, ages, and designs; and

(D) assess the cost of application of the technology or practice in buildings of different types, sizes, ages, and designs, including capital and operational costs.

(3) The Administrator shall establish and utilize a standard format for presentation of the technology and management practice assessment bulletins. The format shall be designed to facilitate assessment of technologies or practices by interested parties, including homeowners and building owners and managers.

(4) The Administrator shall provide that bulletins published pursuant to this subsection shall be published on a schedule consistent with the publication of health advisories pursuant to section 5(b) of this Act to the extent practicable.

(5) Bulletins published pursuant to this subsection shall be provided to the Indoor Air Clearinghouse provided for in section 12 of this Act and, to the extent practicable, shall be made available to architecture, design, and engineering firms and building owners and managers and to organizations representing such parties.

(e) CHILD CARE FACILITIES.—(1) The Administrator shall develop protocols for the measurement of radon gas in child care facilities within six months after the date of enactment of this Act.

(2) The Administrator shall make available to the appropriate agency of each State, to organizations representing child care facilities, and to the public, information concerning appropriate techniques to measure radon levels in child care facilities, areas and physical characteristics of buildings housing child care facilities with high radon risks and mitigation measures for reducing radon levels.

(3) The Administrator is authorized to make available to the appropriate agencies of the State, as designated by the Governor of such State, canisters or other suitable devices for use by such agencies in conducting tests for radon within child care facilities in the State. The Administrator is authorized to make available to such agencies the use of laboratories of the Environmental Protection Agency, or to recommended laboratories, to evaluate any such canisters or devices for the presence of radon levels.

(4) The Administrator is authorized to undertake diagnostic and remedial efforts to reduce the levels of radon in nonresidential child care facilities. Such diagnostic and remedial efforts shall be carried out with a view to developing technology and expertise for the purpose of making such technology and expertise available to any child care facility and the several States.

(5) The Administrator shall submit a report to the Congress on his actions to implement this subsection within twelve months after the date of enactment of this Act and annually thereafter.

(f) EXPOSURE ASSESSMENT.—(1) The Administrator shall conduct a study of the appropriateness, feasibility, and implications of considering human exposure to a pollutant in indoor air in development of ambient air quality standards under section 109 and national emissions standards for hazardous air pollutants under section 112 of the Clean Air Act (42 U.S.C. 7409, 7412).

(2) The Administrator shall establish an advisory group, made up of representatives of the scientific community, industrial and commercial entities and consumer and environmental groups to provide guidance and direction in the development of the study.

(3) The Administrator shall report to the Congress the results of the study not later than three years after the date of enactment of this Act including any recommendations for actions to implement the findings of the study.

(g) SCHOOL ASSESSMENTS.—(1) The Administrator shall conduct a national assessment of the seriousness and extent of indoor air contamination in buildings owned by local educational agencies.

(2) The Administrator shall establish an advisory group made up of representatives of school administrators, teachers, parents and service employees and other interested parties to provide guidance and direction in the development of the national assessment.

(3) The Administrator shall provide a report to Congress of the results of the national assessment not later than two years after the date of enactment of this Act. The report required by this paragraph shall provide such recommendations for activities or programs to reduce and avoid indoor air contamination in buildings

owned by local educational agencies as the Administrator determines to be appropriate.

(h) CLARIFICATION OF AUTHORITY.—(1) Title IV of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 7401 note) is repealed.

(2) Not later than October 1, 1988, the Administrator shall submit to the Congress a report respecting the activities conducted under title IV of the Superfund Amendments and Reauthorization Act of 1986 and his activities pursuant to this Act, and making such recommendations as are appropriate.

INDOOR AIR CONTAMINANT HEALTH ADVISORIES

SEC. 6. (a) LIST OF CONTAMINANTS.—(1) Within two hundred and forty-days after the date of enactment of this Act, the Administrator shall prepare and publish in the Federal Register a list of the contaminants which are known to occur (or which are expected to occur) in indoor air. The list may include combinations or mixtures of contaminants and may refer to such combinations or mixtures by a common name.

(2) The Administrator shall from time to time and as necessary to carry out the provisions of this Act, but not less often than biennially, review and revise such list adding other contaminants pursuant to the requirements of this Act.

(3) The list provided for in paragraph (1) of this subsection shall include, at a minimum—

(A) any air pollutant listed pursuant to section 108(a)(1) of the Clean Air Act (42 U.S.C. 7408(a)(D);

(B) any hazardous air pollutant listed pursuant to section 112(b)(1)(A) of the Clean Air Act (42 U.S.C. 7412(b)(1)(A)); and

(C) any other contaminants which are known to occur (or which are expected to occur) in indoor air.

(4) In development of the list provided for in paragraph (1) of this subsection or in revision of such list pursuant to paragraph (2), the Administrator shall provide for public review and shall consider public comment prior to issuance of a final list.

(5) The listing of contaminants under this subsection is not an agency rulemaking. In considering objections raised in any judicial or related action, the Administrator's decision to list a particular contaminant shall be upheld unless the objecting party can demonstrate that the decision was arbitrary or capricious or otherwise not in accordance with the law. The list of contaminants prepared in accordance with this subsection shall not be construed to indicate that those contaminants not listed are safe for human exposure or without adverse health effect.

(6) Upon application of the Governor of a State showing that a contaminant or potential contaminant in the indoor air which is not listed pursuant to paragraph (1) of this subsection may reasonably be anticipated to have an adverse effect on human health as a result of its presence in the indoor air, the Administrator shall, within ninety days, revise the list established by paragraph (1) of this subsection to include such contaminant or publish in the Federal Register the reasons for not making such a revision.

(b) CONTAMINANT HEALTH ADVISORIES.—(1) The Administrator shall, in consultation with the advisory panel, provided for in subsection (c) of this section, and after providing for public review and comment, pursuant to paragraph (f), publish advisory materials addressing the adverse human health effects of individual contaminants listed pursuant to subsection (a) of this section. Such advisory materials shall, at a minimum, describe—

(A) the physical, chemical, biological, and radiological properties of the contaminant;

(B) the adverse human health effects of the contaminant in various indoor environments and in various concentrations;

(C) an analysis of the risk posed by the contaminant to human health at various concentrations including risk to subpopulations which may be especially sensitive to exposure to the contaminant;

(D) the concentration of the contaminant at which there is no known or anticipated human health effect, with an adequate margin of safety;

(E) to the extent that the contaminant, or a mixture of contaminants, is associated with a particular substance or material, emissions rates which are expected to result in varying levels of contaminant concentration in indoor air; and

(F) any indoor air contaminant standards or related action levels which are in effect under any authority of a Federal statute or regulation, the authority of State statutes or regulations, the authority of any local government, or the authority of another country, including standards or action levels suggested by appropriate international organizations.

(2) Health advisories published pursuant to this section shall in no way limit or restrict the application of requirements or standards established under any other Federal statute.

(3) The Administrator may publish health advisories for contaminants for which a standard has been established pursuant to section 109 or 112 of the Clean Air Act (42 U.S.C. 7409, 7412).

(4) The Administrator shall establish and utilize a standard format of presentation of indoor air contaminant health advisories. The format shall be designed to facilitate public understanding of the range of risks of exposure to indoor air contaminants and shall include a summary of the research and information concerning the contaminant which is understandable to public health professionals and to those who lack training in toxicology.

(5) The Administrator shall publish health advisories for individual indoor air contaminants listed pursuant to subsection (a) of this section as expeditiously as possible. At a minimum, the Administrator shall publish not less than six advisories within eighteen months of the date of enactment of this Act and shall publish an additional six advisories within thirty six months of the date of enactment of this Act.

(6) Health advisories shall be based on the most current available scientific and related findings or information and shall be reviewed, revised, and republished to reflect new scientific and related findings or information on a periodic basis but not less frequently than every five years.

(7) In development and revision of health advisories pursuant to this subsection, the Administrator shall provide for public review and comment, including provision of notice in the Federal Register of the intent to publish a health advisory not less than ninety days prior to publication.

(c) ADVISORY PANEL.—The Indoor Air Panel of the EPA Science Advisory Board shall advise the Administrator with respect to the implementation of this section including, but not limited to, the listing of contaminants, the contaminants for which advisories should be published, the order in which advisories should be published, the content, quality, and format of advisory documents, and the revision of such documents. The Administrator shall provide that a representative of the Agency for Toxic Substances and Disease Registry, and the National Institute for Environmental Health Sciences shall participate in the work of the Board as ex officio members.

NATIONAL INDOOR AIR QUALITY RESPONSE PLAN

SEC. 7. (a) AUTHORITY.—(1) The Administrator shall, in consultation with appropriate Federal agencies, develop and publish a national indoor air quality response plan.

(2) The response plan shall provide for implementation of a range of response actions which will result in the reduction of human exposure to indoor air contaminations listed pursuant to section 6(a) of this Act and attainment, to the fullest extent practicable, of indoor air contaminant concentration levels at which there is no known or anticipated human health effect, with an adequate margin of safety.

(b) EXISTING AUTHORITY.—The Administrator shall include in the plans provided for in subsection (a) of this section a description of specific response actions to be implemented based on existing statutory authorities provided in—

(1) the Clean Air Act (42 U.S.C. 7401 et seq.);

(2) the Toxic Substances Control Act (15 U.S.C. 201 et seq.);

(3) the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.);

(4) the Safe Drinking Water Act (42 U.S.C. 300 et seq.);

(5) the authorities of the Consumer Product Safety Commission;

(6) the authorities of the Occupational Safety and Health Administration; and

(7) other regulatory and related authorities provided under any other Federal statute.

(c) SUPPORTING ACTIONS.—The Administrator shall include in the plans provided for in subsection (a) of this section a description of specific supporting actions including, but not limited to—

(1) programs to disseminate technical information to public health, design, and construction professionals concerning the risks of exposure to indoor air contaminants and methods and programs for reducing exposures to such contaminants;

(2) development of guidance documents addressing individual contaminants, groups of contaminants, sources of contaminants, or types of buildings or structures and providing infor-

mation on measures to reduce exposure to contaminants including—

(A) the estimated cost of such measures;

(B) the technologic feasibility of such measures; and

(C) the effectiveness and efficiency of such measures.

(3) education programs for the general public concerning the health threats posed by indoor air contaminants and appropriate individual response actions;

(4) technical assistance to States and local air pollution control organizations and related groups concerning the risks of exposure to indoor air contaminants and methods and programs for reducing exposures to such contaminants; and

(5) development of model building codes, including ventilation rates, for various types of buildings designed to reduce levels of indoor air contaminants.

(d) CONTENTS OF PLAN.—In describing specific actions to be taken under subsections (b) and (c) of this section, the Administrator shall—

(1) identify the contaminant or contaminants to be addressed by a particular action;

(2) identify the statutory basis for the action;

(3) identify the schedule and process for implementation of the action;

(4) identify contaminants, or circumstances of contamination, for which immediate action to protect public health is necessary and appropriate and describe the actions needed and the schedule for action;

(5) identify the Federal agency which will implement the action;

(6) identify the financial resources needed to implement the specific action and the source of these resources;

(7) identify contaminants, or circumstances of contamination, where existing regulatory or statutory authority is not adequate to address an identified contaminant or circumstance of contamination and recommend legislation to provide needed authority; and

(8) identify contaminants, or circumstances of contamination, where continued reduction of contamination requires development of technology or technologic mechanisms, and identify the Federal agency responsible for such development, the schedule for such development effort, and an estimate of the cost of the development effort.

(e) SCHEDULE.—The response plan provided for in subsection (a) shall be submitted to Congress within twenty-four months of enactment of this Act and biennially thereafter.

(f) REVIEW.—(1) The Administrator shall provide for public review and comment on the response plan provided for in this section, including provision of notice in the Federal Register for public review and comment not less than three months prior to submission to the Congress. The Administrator shall include in the response plan a summary of public comments.

(2) The Administrator shall provide for the review and comment on the response plan by the Council on Indoor Air Quality provided for under section 11 of this Act. The Administrator shall include in

the response plan a letter and any supporting materials providing the comments of the Council on Indoor Air Quality.

FEDERAL BUILDING RESPONSE PLAN AND DEMONSTRATION PROGRAM

SEC. 8. (a) AUTHORITY.—The Administrator and the Administrator of the General Services Administration shall develop and implement a program to respond to and reduce indoor air contamination in Federal buildings and to demonstrate methods of reducing indoor air contamination in new Federal buildings.

(b) FEDERAL BUILDING RESPONSE PLAN.—(1) The Administrator of the General Services Administration, in consultation with the Administrator, shall prepare a response plan addressing indoor air quality in Federal buildings and shall provide for the implementation of such plan. The plan shall, to the fullest extent practicable, be developed in conjunction with the response plan pursuant to section 7 of this Act.

(2) The response plan shall provide for implementation of a range of response actions which will result in the reduction of human exposure to indoor air contaminants listed pursuant to section 6(a) of this Act and attainment, to the fullest extent practicable, of indoor air contaminant concentration levels at which there is no known or anticipated human health effect, with an adequate margin of safety.

(3) Federal building response plans provided for in paragraph (1) of this subsection shall include--

(A) a list of all Federal buildings;

(B) a description and schedule of general response actions including general management practices, product purchase guidelines, air quality problem identification practices and methods, personnel training programs, and other actions to be implemented to reduce exposures to indoor air contaminants in those buildings listed in paragraph (A);

(C) a list of individual Federal buildings listed in paragraph (A) for which there is sufficient evidence of indoor air contamination or related employee health effects to warrant assessment of the building pursuant to section 13 of this Act and a schedule for development and submittal of building assessment proposals pursuant to subsection 13(d) of this Act;

(D) a description and schedule of specific response actions to be implemented in each specific building identified in paragraph (C) and assessed pursuant to section 13 of this Act;

(E) an identification of the Federal agency responsible for funding and implementation of each response action identified in paragraphs (B) and (D); and

(F) an identification of the estimated costs of each response action identified in paragraphs (B) and (D) and the source of these resources.

(4) The response plan provided for in this subsection shall address each Federal building identified in paragraph 3(A), except that specific buildings may be exempted from coverage under this subsection. Such buildings may be exempted on the grounds of—

(A) national security;

(B) anticipated demolition or termination of Federal ownership within three years; and

(C) specialized use of a building which precludes necessary actions to obtain applicable standards or concentration levels.

(5) The Administrator of the General Services Administration shall provide, by regulation, a method and format for filing of comments and complaints concerning indoor air quality in Federal buildings by workers in such buildings and by the public. The Administrator of the General Services Administration shall provide a listing of each such filing and an analysis of such filings in the plan required pursuant to this subsection.

(6) The plan provided for in subsection (b) shall be submitted to Congress within twenty-four months of enactment of this Act and biennially thereafter.

(7) The Administrator of the General Services Administration shall provide for public review and comment on the response plan provided for in this section, including provision of notice in the Federal Register not less than three months prior to submission to the Congress. The response plan shall include a summary of public comments. The Council on Indoor Air Quality, provided for under section 11 of this Act, shall review and comment on the plan and such comments and any supporting materials shall be included in the plan.

(c) INDOOR AIR QUALITY RESERVE.—(1) The Administrator of the General Services Administration shall reserve 0.5 per centum of any funds appropriated for construction of new Federal buildings for design and construction of measures to reduce indoor air contaminant concentrations within such buildings.

(2) Measures which may be funded with the reserve provided for in this subsection may include, but are not limited to—

(A) development and implementation of general design principles intended to avoid or prevent contamination of indoor air;

(B) design and construction of improved ventilation techniques or equipment;

(C) development and implementation of product purchasing guidelines;

(D) design and construction of contaminant detection and response systems;

(E) development of building management guidelines and practices; and

(F) training in building and systems operations for building management and maintenance personnel.

(3) Upon completion of construction of each Federal building covered by this section, the Administrator of the General Services Administration shall file with the Administrator, with the Clearinghouse established under section 12 of this Act, and with the Council established under section 10 of this Act, a report describing the uses made of the reserve provided for in this subsection. Such report shall be in sufficient detail to provide design and construction professionals with models and general plans of various indoor air contaminant reduction measures adequate to assess the appropriateness of such measures for application in other buildings.

(4) The Administrator of the General Services Administration, with the concurrence of the Administrator, may exempt a planned

Federal building from the requirements of this section if he finds that such exemption is required on the grounds of national security or that the intended use of the building is not compatible with the authority of this section.

(d) NEW EPA BUILDING.—Any new building constructed for use by the Environmental Protection Agency as headquarters shall be designed, constructed, maintained, and operated as a model to demonstrate principles and practices for protection of indoor air quality.

STATE AND LOCAL INDOOR AIR QUALITY PROGRAMS

SEC. 9. (a) MANAGEMENT AND ASSESSMENT STRATEGY DEMONSTRATION.—(1) The Governor of a State may apply to the Administrator for a grant to support demonstration of the development and implementation of a management strategy and assessment with respect to indoor air quality within such State.

(2) State indoor air quality management strategies shall—

(A) identify a lead agency and provide an institutional framework for protection of indoor air quality;

(B) identify and describe existing programs, controls or related activities concerning indoor air quality within State agencies including regulations, educational programs, assessment programs, or other activities;

(C) identify and describe existing programs, controls, or related activities concerning indoor air quality of local and other sub-State agencies and assure coordination among local, State, and Federal agencies involved in indoor air quality activities in the State; and

(D) assure coordination of indoor air quality programs with ambient air quality programs and related activities.

(3) State indoor air quality assessment programs shall—

(A) identify indoor air contaminants of concern and, to the extent practicable, assess the seriousness and the extent of indoor air contamination by contaminants listed in section 6(a) of this Act;

(B) identify the classes or types of buildings or other indoor environments in which indoor air contaminants pose the most serious threat to human health;

(C) if applicable, identify geographic areas in the State where there is a reasonable likelihood of indoor air contamination as a result of the presence of contaminants in the ambient air or the existence of sources of a contaminant;

(D) identify methods and procedures for indoor air contaminant assessment and monitoring;

(E) provide for periodic assessments of indoor air quality and identification of indoor air quality changes and trends; and

(F) establish methods to provide information concerning indoor air contamination to the public and to educate the public and interested groups, including building owners and design and engineering professionals, about indoor air contamination.

(4) As part of a management strategy and assessment pursuant to this subsection, the applicant may develop contaminant action

levels, guidance, or standards and may draw on health advisories developed pursuant to section 6 of this Act.

(5) States which are selected to demonstrate the development of management and assessment strategies shall provide a management strategy and assessment pursuant to subsections (2) and (3) to the Administrator within thirty-six months of selection and shall certify to the Administrator that the strategy and assessment meet the requirements of this Act.

(6) States shall provide for public review and comment on the management strategy and assessment prior to submission of such strategy and assessment to the Administrator.

(b) RESPONSE PROGRAMS.—(1) A Governor of a State or the executive officer of a local air pollution control agency may apply to the Administrator for grant assistance to develop a response program designed to reduce human exposure to an indoor air contaminant or contaminants in the State, or in a specific class or type of building in that State, or in a specific geographic area of that State.

(2) A response program shall—

(A) address a contaminant or contaminants listed pursuant to section 6(a) of this Act;

(B) identify existing data and information concerning the contaminant or contaminants to be addressed, the class or type of building to be addressed, and the specific geographic area to be addressed;

(C) describe and schedule the specific actions to be taken to reduce human exposure to the identified contaminant or contaminants;

(D) identify the State or local agency or public organization which will implement the response actions;

(E) identify the Federal, State, and local financial resources to be used to implement the response program; and

(F) provide for the assessment of the effectiveness of the response program.

(3) As part of a response program pursuant to this subsection, an applicant may develop contaminant action levels, guidance, or standards based on health advisories developed pursuant to section 6 of this Act.

(c) GRANT MANAGEMENT.—(1) Grants under subsection (a)(1) of this subsection shall not be less than $75,000 for each fiscal year.

(2) In selecting States for demonstration and implementation of management strategies and assessments under subsection (a)(1) the Administrator shall consider—

(A) the previous experience of the State in addressing indoor air quality issues;

(B) the seriousness of the indoor air quality issues identified by the State; and

(C) the potential for demonstration of innovative management or assessment measures which may be of use to other States.

(3) In selecting States for demonstration of management strategies and assessments under subsection (a)(1), the Administrator shall focus resources to assure that sufficient funds are available to selected States to provide for the development of comprehensive and thorough management strategies and assessments in each se-

lected State and to adequately demonstrate implementation of such strategies and assessments.

(4) Grants under subsection (b)(1) of this section shall not exceed $250,000 per fiscal year and shall be available to the State for a period of not to exceed three years.

(5) In selecting response programs developed under subsection (b) for grant assistance, the Administrator shall consider—

(A) the potential for the response program to bring about reductions in indoor air contaminant levels;

(B) the contaminants to be addressed, giving priority to contaminants for which health advisories have been developed pursuant to section 6 of this Act;

(C) the type of building to be addressed, giving priority to building types in which substantial human exposures to indoor air contaminants occur;

(D) the potential for development of innovative response measures or methods which may be of use to other States or local air pollution control agencies; and

(E) the State indoor air quality management strategy and assessment, giving priority to States with complete indoor air management strategies and assessments.

(6) The Federal share of grants under subsections (a) and (b) of this section shall not exceed 75 per centum of the costs incurred in demonstration and implementation of such activities and shall be made on the condition that the non-Federal share is provided from non-Federal funds.

(7) Funds granted pursuant to subsections (a) and (b) in a fiscal year shall remain available for obligation for the fiscal year in which obligated and for the following fiscal year.

(8) No grant shall be made under this section in any fiscal year to a State or local air pollution control agency which in the preceding year received a grant under this section unless the Administrator determines that such agency satisfactorily implemented such grant activities in such preceding fiscal year.

(9) States and air pollution control agencies shall provide such information in applicants for grant assistance and pertaining to grant funded activities as the Administrator requires.

OFFICE OF INDOOR AIR QUALITY

SEC. 10. (a) ESTABLISHMENT OF OFFICE.—The Administrator shall establish an Office of Indoor Air Quality within the Office of Air and Radiation at the Environmental Protection Agency.

(b) RESPONSIBILITIES OF OFFICE.—The Office of Indoor Air Quality shall—

(1) list indoor air contaminants and develop health advisories pursuant to section 6 of this Act;

(2) develop national indoor air quality response plans as provided for in section 7 of this Act;

(3) manage Federal grant assistance provided to air pollution control agencies under section 8 of this Act;

(4) assure the coordination of Federal statutes and programs administered by the Agency relating to indoor air quality and reduce duplication or inconsistencies among these programs;

(5) work with other Federal agencies to assure the effective coordination of programs related to indoor air quality; and

(6) work with public interest groups and the private sector in development of information related to indoor air quality including the health threats of human exposure to indoor air contaminants, the development of technologies and methods to control such contaminants, and the development of programs to reduce contaminant concentrations.

(c) ORGANIZATION OF OFFICE.—The Office of Indoor Air Quality shall—

(A) be directed by a director who shall be a member of the Senior Executive Service;

(B) include a staff of not less than ten permanent, full-time employees; and

(C) be supported by not less than one permanent, full-time employee in each Agency regional office.

COUNCIL ON INDOOR AIR QUALITY

SEC. 11. (a) AUTHORITY.—There is established a Council on Indoor Air Quality.

(b) RESPONSIBILITIES.—The Council on Indoor Air Quality shall—

(1) provide for the full and effective coordination of Federal agency activities relating to indoor air quality;

(2) provide a forum for resolution of conflicts or inconsistencies in policies or programs related to indoor air quality;

(3) review and comment on the national indoor air response program developed pursuant to section 7 of this Act and the Federal Building Response Plan developed pursuant to section 8(b); and

(4) prepare a report to Congress pursuant to subsection (d) of this subsection.

(c) ORGANIZATION.—(1) The Council on Indoor Air Quality shall include senior representatives of Federal agencies involved in indoor air quality programs including—

(A) the Environmental Protection Agency;

(B) the Department of Health and Human Services;

(C) the Department of Labor;

(D) the Department of Housing and Urban Development;

(E) the Department of Energy;

(F) the Department of Transportation;

(G) the Consumer Product Safety Commission; and

(H) the General Services Administration.

(2) The Environmental Protection Agency shall chair the Council.

(3) The Council shall be served by a staff to include an Executive Director and not less than three full-time equivalent employees.

(d) REPORT TO CONGRESS.—(1) The Council shall submit to the Congress, within eighteen months of enactment of this Act, and biennially thereafter, a report which shall—

(A) describe and assess the seriousness, extent, and characteristics of indoor air contamination throughout the country;

(B) summarize the major research issues concerning the protection of indoor air quality, describe the research accomplish-

ments of Federal agencies over the previous two years, and provide an agenda of indoor air quality research for individual Federal agencies over a three-year period;

(C) provide a general description of the activities to be conducted by Federal agencies to address indoor air quality problems over the following three-year period; and

(D) make recommendations for any actions needed to assure the quality of indoor air, including recommendations relating to institutional structures, funding, and legislation.

(2) The Council shall provide for public review and comment on the report required by this subsection.

(e) EPA-HUD MEMORANDUM OF UNDERSTANDING.—(1) Within six months after the date of enactment of this Act, the Administrator and the Secretary of the Department of Housing and Urban Development shall enter into a Memorandum of Understanding (MOU) to define their respective responsibilities and planned actions to address the hazards to human health caused by radon contamination.

(2) The MOU shall describe the plan of the Department of Housing and Urban Development to assist the Administrator in carrying out EPA's authority to assess the extent of radon in the United States and develop measures to avoid and reduce radon contamination. The MOU shall describe how the Secretary will assist the Administration by using the Secretary's existing programs to incorporate radon mitigation techniques in a limited number of projects assisted by the Department and to evaluate the effectiveness of those techniques.

(3) The Department of Housing and Urban Development shall implement the plan it develops under subsection (2).

(4) The Secretary of the Department of Housing and Urban Development shall submit a report to the Congress on his actions to implement the MOU within two years of the date of enactment of this Act.

NATIONAL INDOOR AIR QUALITY INFORMATION CLEARINGHOUSE

SEC. 12. AUTHORITY.—(1) The Administrator is authorized and directed to establish a national indoor air quality clearinghouse to be used to disseminate indoor air quality information to other Federal agencies, State, and local governments, and private organizations and individuals.

(2) The clearinghouse shall be a repository for reliable indoor air quality related information to be collected from and made available to government agencies and private organizations and individuals. At a minimum, the clearinghouse established by this section shall make available reports, programs, and materials developed pursuant to the requirements of this Act.

(3) The clearinghouse shall operate a toll-free "hotline" on indoor air quality which shall be available to provide to the public general information about indoor air quality and general guidance concerning response to indoor air quality contamination problems.

(4) The Administrator may provide for the design, development, and implementation of the clearinghouse through a contractual agreement with a nonprofit organization.

BUILDING ASSESSMENT DEMONSTRATION

SEC. 13. (a) AUTHORITY.—(1) The Director of the National Institute for Occupational Safety and Health shall, in consultation with the Administrator, implement a Building Assessment Demonstration Program to support development of methods, techniques, and protocols for assessment of indoor air contamination in non-residential, non-industrial buildings and to provide assistance and guidance to building owners and occupants on measures to reduce indoor air contamination.

(2) In implementation of this section, the Director shall have the authority to conduct on-site assessments of individual buildings, including Federal, State, and municipal buildings.

(3) Nothing in this section shall in any way limit or constrain existing authorities pursuant to the Occupational Safety and Health Act of 1970 (29 U.S.C. 651).

(b) ASSESSMENT ELEMENTS.—Assessments of individual buildings conducted pursuant to this section shall, at a minimum, provide—

(A) an identification of suspected contaminants in the air in the building and the level of such contaminants;

(B) an assessment of the probable sources of contaminants in the air in the building;

(C) a review of the nature and extent of health concerns and symptoms identified by building occupants;

(D) an assessment of the probable association of indoor air contaminants with the health and related concerns of building occupants including assessment of occupational and environmental factors which may relate to the health concerns;

(E) identification of appropriate measures to control contaminants in the air in the building, to reduce the concentration levels of contaminants, and to reduce exposure to contaminants; and

(F) evaluation of the effectiveness of response measures in control and reduction of contaminants and contaminant levels, the change in occupant health concerns and symptoms, the approximate costs of such measures, and any additional response measures which may reduce occupant's health concerns.

(c) ASSESSMENT REPORTS.—(1) The Director shall prepare—

(A) a preliminary report of each building assessment which shall document findings concerning assessment elements (A) through (E) of subsection (6); and

(B) a final report which shall provide an overall summary of the building assessment including information on the effectiveness and cost of response measures, and the potential for application of response measures to other buildings.

(2) Preliminary assessment reports shall be prepared not later than one hundred and eighty days after the selection of a building for assessment. Final assessment reports shall be prepared not later than one hundred and eighty days after completion of the preliminary report.

(3) Preliminary and final reports shall be made available to building owners, occupants, and the authorized representatives of occupants.

(d) BUILDING ASSESSMENT PROPOSAL.—(1) The Director shall consider individual buildings for assessment under this section in response to a proposal identifying the building and the building owner and providing preliminary, background information about the nature of the indoor air contamination, previous responses to air contamination problems, and the characteristics, occupancy, and uses of the building.

(2) Building assessment proposals may be submitted by a building owner or occupants or the authorized representatives of building occupants, including the authorized representatives of employees working in a building.

(e) BUILDING ASSESSMENT SELECTION.—(1) In selection of buildings to be assessed under this section, the Director shall consider—

(A) the seriousness and extent of apparent indoor air contamination and human health effects of such contamination;

(B) the proposal for a building assessment submitted pursuant to subsection (d) of this section;

(C) the views and comments of the building owners;

(D) the potential for the building assessment to expand knowledge of building assessment methods including identification of contaminants, assessment of sources, and development of response measures; and

(E) the listing of a building pursuant to paragraph (C) of section 8(b)(3).

(2) The Director shall provide a preliminary response and review of building assessment proposals to applicants and the applicable building owner within sixty days of receipt of a proposal and, to the extent practicable, shall provide a final decision concerning selection of a proposal within one hundred and twenty days of submittal.

(f) BUILDING ASSESSMENT SUPPORT.—(1) The Director may enter into agreements with private individuals, firms, State and local governments, or academic institutions for services and related assistance in conduct of assessments under the authority of this section.

(2) The Director may enter into agreements with other Federal agencies for the assignment of Federal employees to a specific building assessment project for periods of up to one hundred and eighty days.

(g) BUILDING ASSESSMENT SUMMARY REPORT.—(1) The Director shall provide, on an annual basis, a report on the implementation of this section to the Administrator of the Environmental Protection Agency and to the Council on Indoor Air Quality established pursuant to section 11 of this Act.

(2) The Director shall, from time to time and in consultation with the Administrator, publish general reports containing materials, information, and general conclusions concerning assessments conducted pursuant to this section. Such reports may address concerns related to remediation of indoor air contamination problems, assessment of health related concerns, and prevention of such problems through improved design, materials and product specifications, and management practices.

(3) Reports prepared pursuant to this subsection and subsection (c) of this section shall be provided to the Indoor Air Clearinghouse

provided for in section 12 of this Act and, to the extent practicable, such reports shall be made available to architectural, design and engineering firms and to organizations representing such firms.

REGIONAL TRAINING CENTERS

SEC. 14. REGIONAL TRAINING CENTERS.—(a) GRANT PROGRAM.—The Administrator shall make grants to institutions of higher learning (or consortium of such institutions) to establish and operate five regional radon training centers.

(b) RESPONSIBILITIES OF THE CENTER.—Each center shall provide instruction on radon diagnosis and mitigation for, and disseminate radon related information on diagnosis, monitoring, analysis, mitigation, and health effects to State and local officials, professional and private firms, and the public.

(c) APPLICATIONS.—Any institution of higher learning (or consortium of such institutions) which is interested in receiving a grant under this section shall submit to the Administrator an application in such form and containing such information as the Administrator may require.

(d) SELECTION CRITERIA.—The Administrator shall select recipients of grants under this section on the basis of the following criteria—

(1) the demonstrated expertise of the applicant in radon related issues;

(2) the demonstrated expertise of the applicant in related training and information activities;

(3) the extent to which the program proposed by the applicant meets the objectives of subsection (b);

(4) the seriousness of the radon problem in the region; and

(5) the geographical coverage of the proposed center.

(e) AUTHORITIES.—The designated research centers are authorized to—

(1) enter into contracts or cooperative agreements with public agencies and authorities, nonprofit institutions and organizations, private research centers, and other persons; and

(2) develop or acquire such radon demonstration methods, technologies, and related structures as the Administrator determines to be necessary to implement the requirements of this section.

(f) EQUITABLE DISTRIBUTION.—The Administrator shall allocate funds made available to carry out this section equitably among regions of the United States. One of the five centers shall be located in close proximity to the Reading Prong. One of the five centers shall be located in New England.

(g) PROPOSED TRAINING PROGRAM.—Prior to and as a condition of receipt each year of funds appropriated to carry out this section, each training center shall submit to the Administrator for approval a program for training activities satisfactory to the Administrator. Such program shall be developed in consultation with State governments and other agencies and institutions within the region, and with interested members of the public.

(h) REVIEW AND EVALUATION.—(1) The Administrator shall establish procedures for a careful and detailed evaluation of each train-

ing center and the quality and extent of its radon training program and activities.

(2) The Administrator shall arrange for each training center supported under this section to be evaluated within two years after its establishment and to be reevaluated at intervals not to exceed five years. If, as a result of such an evaluation, the Administrator determines that a training center does not qualify for further support under this section, then no further grants to the training center may be made until the training center's qualification is reestablished to the satisfaction of the Administrator.

STATE AND FEDERAL AUTHORITY

SEC. 15. Nothing in this title shall be construed, interpreted, or applied to preempt, displace, or supplant any other State or Federal law, whether statutory or common or any local ordinance.

AUTHORIZATIONS

SEC. 16. (a) AGENCY AUTHORIZATIONS.—(1) For the purpose of carrying out sections 5 (a), (b), (c), and (e) and 6 of this Act there is authorized to be appropriated $18,000,000 for each of the fiscal years ending September 30, 1989, 1990, 1991, 1992, and 1993. Of such sums appropriated, one quarter shall be reserved for implementation of section 6 of this Act and one quarter shall be reserved for implementation of section 5(c) of this Act.

(2) For the purpose of carrying out sections 7, 9, and 12 there is authorized to be appropriated $10,000,000 for each of the fiscal years ending September 30, 1989, 1990, 1991, 1992, and 1993. Of such sums appropriated, one-fifth shall be reserved for implementation of section 12 and one-tenth shall be reserved for implementation of subsection 7(e).

(3) For the purpose of carrying out section 8 of this Act, there is authorized to be appropriated $12,000,000 for each of the fiscal years ending September 30, 1989, 1990, 1991, 1992, and 1993. Of such sums appropriated, one-third shall be reserved for the purpose of carrying out section 8(b) of this Act.

(b) OTHER AUTHORIZATIONS.—(1) For the purpose of carrying out section 10 of the Act there is authorized to be appropriated $1,500,000 for each fiscal year ending September 30, 1989, 1990, 1991, 1992, and 1993.

(2) For the purpose of carrying out section 13 of this Act there is authorized to be appropriated $5,000,000 per year for each fiscal year ending September 30, 1989, 1990, 1991, 1992, and 1993.

(3) For the purpose of carrying out section 14 of this Act, there is authorized to be appropriated $2,000,000 for each of the fiscal years ending September 30, 1989, 1990, 1991, 1992, and 1993.

(4) For the purpose of carrying out section 5(d) of this Act, there is authorized to be appropriated $1,000,000 for each fiscal year ending September 30, 1989, 1990, 1991, 1992, and 1993.

CHANGES IN EXISTING LAW

Section 12 of the Rule XXVI of the Standing Rules of the Senate requires publication of any changes in existing law by the reported bill. The bill makes no changes in existing law.

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